

## **REMARKS**

### **Formal Matters**

Claims 1-2, 11, 13-30 and 44-52 are pending after entry of the amendments set forth herein.

Claims 2, 16-19, 21 and 23-30 are currently withdrawn from consideration.

Claims 1, 11, 13-15, 20, 22 and 44-48 were examined. Claims 1, 11, 13-15, 20, 22 and 44-48 were rejected.

Applicants respectfully request reconsideration of the application in view of the amendments and remarks made herein.

No new matter has been added.

### **The Office Action**

#### **Claims Rejected Under 35 U.S.C. Section 102(b) (Koros et al.)**

Claims 1, 44 and 46-47 were rejected under 35 U.S.C. Section 102(b) as being anticipated by Koros et al., U.S. Patent No. 5,908,382.

The Examiner asserted, inter alia, that Koros et al. discloses a retractor 10 comprising first side member 14 and second side member 18 interconnecting upper and lower spreader portions 28, 16 at first and second end portions of the upper and lower spreader portions, respectively.

Applicants respectfully traverse. It is respectfully submitted that movable arm 18 of Koros et al. connects to rack gear 14. Thus, neither 14 nor 18 connects to first end portions of an upper spreader member and lower spreader member or to second end portions of an upper spreader member and lower spreader member.

To clarify this distinction, claim 1 has been amended above to recite that said first side member connects to said upper and lower spreader portions on a first side of the system at first end portions of said upper and lower spreader portions, and said second side member connects to said upper and lower spreader portions on a second side of the system at second end portions of said upper and lower spreader portions. Support for this amendment can be found, for example, at Figs. 1A-2 and the descriptions thereof, and throughout the specification and drawings. It is respectfully submitted that Koros et al. fails

to disclose this arrangement.

As to claims 44 and 46-47, Applicants disagree that blade 15 of Koros et al. has a tongue-depressor-like structure. To the contrary, Koros et al. discloses at column 5, line 61 that 15 is a standard blade.

It is further noted that claims 44 and 46-47 depend from claim 1 and are allowable for at least the same reasons provided above with regard to claim 1.

In view of the above amendments and remarks, the Examiner is respectfully requested to reconsider and withdraw the rejection of claims 1, 44 and 46-47 under 35 U.S.C. Section 102(b) as being anticipated Koros et al., U.S. Patent No. 5,908,382, as being inappropriate.

**Claims Rejected Under 35 U.S.C. Section 102(b) (Santilli et al.)**

Claims 11, 13-15, 20 and 45 were rejected under 35 U.S.C. Section 102(b) as being anticipated by Santilli et al., U.S. Patent No. 6,099,468. The Examiner asserted that Santilli et al. disclose an upper spreader portion 46 and a lower spreader portion 82 being positioned relative to each other to produce a substernal space (Figs. 1-2).

Applicants respectfully traverse. Applicants respectfully submit that Santilli et al. discloses that the retractor is for use in partial sternotomy, e.g., see the Abstract. Accordingly, it is respectfully submitted that the sternal retractor system of Santilli et al. is not configured to produce a substernal space.

The Examiner asserted that the grip 14 of the sternal retractor 10 of Santilli et al. is capable of engaging the diaphragm and abdominal organs and has a free end portion.

Applicants respectfully traverse. It is respectfully submitted that there is no disclosure or suggestion by Santilli et al. that the grip 14 of Santilli et al. is . is capable of engaging the diaphragm and abdominal organs and has a free end portion. Applicants respectfully submit that the grip 14 has neither sufficient length nor the appropriate shape for performing this function, and that the Examiner's assertion is the result of speculation, not a teaching or disclosure by Santilli et al.

To the contrary , Santilli discloses at column 14, that the grips 12,14 are used to open the thoracic cavity and are used to contact opposite sides of an incision in the sternum to separate the sternal incision to form an opening.

Further, Applicants have amended claim 11 above to recite that a single actuator is operable to lift both of said hooks of said upper spreader portion. Support for this amendment can be found, for

example, at paragraph [0045] of the specification and throughout the specification and drawings. It is respectfully submitted that Santilli et al. fails to disclose this feature.

Regarding claims 13-15, it is respectfully submitted that these claims depend from claim 11 and are allowable for at least the same reasons provided above with regard to claim 11.

As to claim 20, as noted above, Santilli et al. provides no disclosure, teaching or suggestion that the sternal retractor 10 discloses is adapted to lift the rib cage at the site of the abdominal opening.

As to claim 45, it is respectfully submitted that the Examiner has inconsistently referred to the "depressor surface" at times as 82 and, at other times, as 14, e.g., see page 3, no. 3 of the Office Action. Applicants respectfully submit that the grip 14 of Santilli et al. is not tongue-depressor like in structure and would cause serious damage to the diaphragm of a patient if one were to attempt to lift the rib cage with 12 while depressing the diaphragm with 14.

Further, it is respectfully submitted that claims 20 and 45 depend from claim 11 and are allowable for at least the same reasons provided above with regard to claim 11.

In view of the above amendments and remarks, the Examiner is respectfully requested to reconsider and withdraw the rejection of claims 11, 13-15, 20 and 45 under 35 U.S.C. Section 102(b) as being anticipated by Santilli et al., U.S. Patent No. 6,099,468, as being inappropriate.

**Claim Rejected Under 35 U.S.C. Section 103(a) (Santilli et al. in view of Jascalevich)**

Claim 22 was rejected under 35 U.S.C. Section 103(a) as being unpatentable over Santilli et al., U.S. Patent No. 6,099,468, in view of Jascalevich, U.S. Patent No. 3,710,783. The Examiner admitted that the system of Santilli et al. does not include an upper spreader portion comprising a screw mechanism for lifting and retracting. The Examiner asserted that Jascalevich discloses a retractor rod D comprising outer threads for adjusting the rod through knob 62 as a retracting and lifting mechanism (Fig. 1) and that it would have been obvious to modify Santilli et al. to include this mechanism.

Applicants respectfully traverse. However, even if the modification proposed by the Examiner would have been obvious, which Applicants do not agree that it would have been obvious, the resultant combination would still fail to meet each and every recitation of claim 22, because claim 22 depends from claim 11 and Jascalevich fails to make up for the deficiencies of Santilli et al. in meeting all of the recitations of claim 11.

In view of the above amendments and remarks, the Examiner is respectfully requested to reconsider and withdraw the rejection of claim 22 under 35 U.S.C. Section 103(a) as being unpatentable

over Santilli et al., U.S. Patent No. 6,099,468, in view of Jascalevich, U.S. Patent No. 3,710,783, as being inappropriate.

**Claim Rejected Under 35 U.S.C. Section 103(a) (Koros et al. in view of Hu et al.)**

Claim 48 was rejected under 35 U.S.C. Section 103(a) as being unpatentable over Koros et al., U.S. Patent No. 5,908,382, in view of Hu et al., U.S. Patent No. 6, 283,912.

The Examiner asserted that Koros et al. discloses the invention substantially as claimed except for the rigid shell being polymeric. Applicants respectfully traverse for at least the same reasons provided above with regard to claims 1 and 47.

The Examiner asserted that Hu et al. discloses a surgical retractor made from rigid polymeric material, and that therefore it would have been obvious to make the side members and upper and lower spreader portions from rigid polymeric material.

Applicants respectfully traverse. It is respectfully submitted that only the blades 14, 16 of Hu et al. are polymeric, and that the crossbar 15 and housings 21, 22 are metallic. The crossbar 15 is metallic and Hu et al. does not form a shell having upper, lower and side portions. Accordingly, Hu et al. does not provide a teaching for making a rigid polymeric shell as claimed.

Further, it is respectfully submitted that claim 48 is allowable over this combination of references for the same reasons provided with regard to claims 1 and 47 above, as Hu et al. does not cure the deficiencies of Koros et al. in meeting all of the recitations of claims 1 and 47.

In view of the above amendments and remarks, the Examiner is respectfully requested to reconsider and withdraw the rejection of claim 48 under 35 U.S.C. Section 103(a) as being unpatentable over Koros et al., U.S. Patent No. 5,908,382, in view of Hu et al., U.S. Patent No. 6, 283,912, as being inappropriate.

**New Claims 49-53**

New claims 49-53 have been submitted above. Claim 49 is an independent claim and claims 50-53 depend from claim 49. Support for these claims can be found in original claim 1, Figs. 1A-2 and the descriptions thereof, and throughout the specification and drawings. The Examiner is respectfully requested to indicate the allowance of claims 49-53 in the next Official Action.

**Conclusion**

Applicants submit that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone the undersigned at the number provided.

The Commissioner is hereby authorized to charge any underpayment of fees associated with this communication, including any necessary fees for extensions of time, or credit any overpayment to Deposit Account No. 50-2653, order number GUID-036.

Respectfully submitted,  
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